Amendments to the Drawings:

The attached three (3) replacement sheets of drawings include changes to FIGS. 1-3 and 5-6. These sheets, which include FIGS. 1-2, 3-4 and 5-6, replace the original sheets depicting FIGS. 1-2, 3-4 and 5-6.

In FIG. 1, reference character 68 has been deleted and reference character 66 has been used to designate the closure element, the reference characters 31 and 32 have been deleted, the reference character 2 is now directed to the sleeper bottom face and not to the damping mat 25, the line for reference character 5 has been extended to be directed to the longitudinal member, and the line for reference character 28 has been extended to be directed to the rail fixing element.

In FIG. 2, the line for reference character 5 has been extended to be directed to the longitudinal member, the line for reference character 17 has been extended to be directed to the intersecting region, the line for reference characters 45a and 45b have been extended to be directed to the end regions of the longitudinal projection 20, which are parts of the longitudinal

member 5, and the line for reference character 20 has been changed to be directed to the longitudinal projection, which is part of the longitudinal member 5.

In FIG. 3, the line for reference character 10 has been amended to be directed to the rail elements, the line for reference character 57 has been amended to be directed to the connecting region between the rail elements, the line for reference character 1 has been amended to be directed to the sleeper, the line for reference character 20 has been amended to be directed to the longitudinal projections, and the line for reference character 45a has been amended to be directed to the end region of the longitudinal projection.

In FIGS. 5-6, the lines for reference character 28 have been amended to be directed to the rail fixing elements within the mounting devices 26.

Attachment:
Three (3) replacement sheets of drawings (FIGS. 1-6)

REMARKS/ARGUMENTS

The claims are 2-4, 6-8, 10-11, 13-14 and 18-27. Claim 1 has been canceled in favor of new claim 27 to better define the invention. Accordingly, claims 2-4, 6-7, 11 and 26, which previously depended on claim 1, have been amended to depend on new claim 27. In addition, claims 5, 9, 12 and 15-17 have been canceled, claims 10 and 13-14 have been amended to depend on new claim 27, claims 18 and 22 have been amended to depend on claim 4, claims 19-21 have been amended to depend on claim 18, and claim 25 has been amended to depend on claim 22. The claims have also been amended to improve their form.

FIG. 1 has been amended to delete the reference character 68 and to use the reference character 66 to designate the closure element. Accordingly, the specification has been amended to delete reference character 68. The specification has also been amended at page 16 to improve its form. In addition, in FIG. 1, the reference characters 31 and 32 have been deleted, the reference character 2 has been made to be directed to the sleeper bottom face and not to the damping mat 25, the line for reference character 5 has been extended to be directed to the longitudinal

member, and the line for reference character 28 has been extended to be directed to the rail fixing element.

In FIG. 2, the line for reference character 5 has been extended to be directed to the longitudinal member, the line for reference character 17 has been extended to be directed to the intersecting region, the line for reference characters 45a and 45b have been extended to be directed to the end regions of the longitudinal projection 20, which are parts of the longitudinal member 5, and the line for reference character 20 has been changed to be directed to the longitudinal projection, which is part of the longitudinal member 5.

In FIG. 3, the line for reference character 10 has been amended to be directed to the rail elements, the line for reference character 57 has been amended to be directed to the connecting region between the rail elements, the line for reference character 1 has been amended to be directed to the sleeper, the line for reference character 20 has been amended to be directed to the longitudinal projection, and the line for reference character 45a has been amended to be directed to the end region of the longitudinal projection.

In FIGS. 5-6, the lines for reference character 28 have been amended to be directed to the rail fixing elements within the mounting devices 26.

Support may be found, *inter alia*, in the disclosure at pages 7, 8 and 15. Reconsideration is expressly requested.

The Examiner objected to the drawings for the reasons set forth on pages 2-4 of the Office Action. In response, Applicant has amended FIGS. 1-3 and 5-6.

With respect to the Examiner's objections concerning reference characters 2, 23 and 25 in FIG. 1, FIG. 1 has been amended so that reference character 2 is now directed to the sleeper bottom face and not to the damping mat 25. The bearing surface 23 at the sleeper bottom face 2 is the bottom surface of the longitudinal members. It is respectfully submitted that the bearing surface 23 of the sleeper bottom face 2 is therefore not the same part as the damping mat 25, as can be seen, for example, from *Williams U.S. Patent No. 1,224,813* of record in this application, which shows a stepped configuration at the bottom face. Therefore, it is respectfully submitted that the

additional reference character 23 for the bearing surface is necessary to distinguish from the damping mat 25.

With respect to the Examiner's objections concerning reference characters 66 and 68 in FIG. 1, reference character 68 has been deleted from FIG. 1, from the specification at page 16 and from the List of reference numbers.

With respect to the Examiner's objections concerning reference characters 3 and 5 in FIG. 1, FIG. 1 has been amended so that reference character 5 is now directed to the longitudinal member.

With respect to the Examiner's objections concerning reference characters 26 and 40 in FIG. 1, it is respectfully submitted that reference character 26 is directed to the mounting device as a whole and in contrast, reference character 40 is directed to the anchoring orifice. Thus, it is respectfully submitted that reference characters 26 and 40 do not indicate the same part of the sleeper in FIG. 1.

With respect to the Examiner's objections concerning reference characters 28, 31 and 32 in FIG. 1, the line for reference character 28 has been extended to be directed to the rail fixing element and the reference characters 31 and 32 have been deleted from FIG. 1 because the two sides are better seen at the right of FIG. 2.

With respect to the Examiner's objections concerning reference characters 5, 17, 32 and 8 in FIG. 2, the line for reference character 5 has been extended to be directed to the longitudinal member and the line for reference character 17 has been extended to be directed to the intersecting region. Reference characters 32 and 8 remain unchanged in FIG. 2 as reference character 32 is directed to a general area in FIG. 2 and reference character 8 is already directed to the longitudinal member in FIG. 2. Accordingly, it is respectfully submitted that no change is necessary with respect to these reference characters.

With respect to the Examiner's objections concerning reference characters 31, 45a and 45b in FIG. 2, the lines for reference characters 45a and 45b have been extended to be

directed to the end regions of the longitiduinal projections 20, which are parts of the longitudinal member 5. Reference character 31 remains unchanged because it is directed to a general area in FIG. 2. Accordingly, it is respectfully submitted that no change in reference character 31 need be made.

With respect to the Examiner's objections concerning reference characters 20 and 12 in FIG. 2, the line for reference character 20 has been changed to be directed to the longitudinal projection, which is part of the longitudinal member 5. Reference character 12 remains unchanged as no change is believed to be necessary in this regard.

With respect to the Examiner's objections concerning reference characters 10 and 57 in FIG. 3, the line for reference character 10 has been amended to be directed to the rail elements and the line for reference character 57 has been amended to be directed to the connecting region between the rail elements.

With respect to the Examiner's objections concerning reference characters 1, 20 and 45a in FIG. 3, the line for reference character 1 has been amended to be directed to the

sleeper, the line for reference character 20 has been amended to be directed to the longitudinal projection, and the line for reference character 45a has been amended to be directed to the end region of the longitudinal projection.

With respect to the Examiner's objections concerning reference characters 31 and 32 in FIG. 4, no change has been made as reference characters 31 and 32 are directed to the two sides of the longitudinal member adjacent to the longitudinal mid-axis 8. Accordingly, it is respectfully submitted that reference characters 31 and 32 as depicted in FIG. 4 are correct and that no change is necessary.

With respect to the Examiner's objections concerning reference characters 26 and 28 in FIGS. 5 and 6, the lines for reference character 28 have been amended to be directed to the rail fixing elements within the mounting devices 26.

It is respectfully submitted that the foregoing amendments overcome the Examiner's objections to drawings, and Applicant respectfully requests that the objections on that basis be withdrawn.

Claims 4-6, 8, 13, 19, 20, and 22-25 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite as set forth on pages 5-7 of the Office Action. In response, Applicant has amended, *inter alia*, claims 4, 6, 8, 14, 19, 20 and 22-25 and has canceled claim 5. It is respectfully submitted that all currently pending claims fully comply with 35 U.S.C. § 112, second paragraph, and Applicant respectfully requests that the rejection on that basis be withdrawn.

Claims 1-11 and 18-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Wills U.S. Patent No. 1,696,662* for the reasons set forth on pages 8-9 of the Office Action. The remaining claims 12-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Wills* for the reasons set forth on page 9 of the Office Action. Essentially the Examiner's position was (1) that *Wills* discloses the claimed double-cross sleeper, except for the alterations of the mounting positions of the rail fixing elements of claims 12-16, and (2) that it would have been obvious to one of ordinary skill in the art to alter the locations and number of anchoring elements of the sleeper of *Wills* to have mounting positions as claimed in claims 12-16 as a design choice for the purpose of accommodating various sized rails, curved

rails, or inclined rails when the track traverses curves or hills.

In response, Applicant has canceled claim 1 in favor of new claim 27 and respectfully traverses the Examiner's rejection for the following reasons.

As set forth in new claim 27, Applicant's invention provides a double-cross sleeper for a gravel-mounted structure on railways. The double-cross sleeper includes a cross member extending along a sleeper longitudinal axis, first and second longitudinal members extending along first and second longitudinal mid-axes, respectively, at a right angle to the sleeper longitudinal axis, and first and second sleeper end regions along the sleeper longitudinal axis lateral to the first and second longitudinal members, respectively.

Three mounting devices are provided at each side of the longitudinal mid-axis of each longitudinal member, and the first and second longitudinal members have a stepped design and longitudinal projections extending out along the first and second longitudinal mid-axes, respectively, beyond the first and second cross-member side faces, respectively, in first and second

intersecting regions, respectively, between the cross- member and the first and second longitudinal members, respectively. At the end regions in the extension of the sleeper longitudinal axis to the side of the longitudinal members, the sleeper has transverse extensions. At least one of the length of the first bearing and the length of the second bearing is at least 2/3 of the width of the first or second longitudinal member.

In this way, Applicant's invention provides a sleeper for a gravel-mounted structure on railway tracks which is inexpensive to manufacture and lends itself to flexible track building and to improved and variable absorption of track lateral and longitudinal forces, thereby improving the service properties of railway tracks. In addition, with Applicant's sleeper, a connecting element may be mounted on the sleeper in the laid state in order to connect two consecutive track elements.

Contrary to the Examiner's position, it is respectfully submitted that *Wills* fails to disclose or suggest a double-cross sleeper. The sleeper of *Wills* has no longitudinal members extending in a right angle to the sleeper longitudinal axis as recited in Applicant's new claim 27. In contrast, the

longitudinal mid-axis of the bearings or the longitudinal members, respectively, in *Wills* is parallel to the sleeper longitudinal axis. Further, the sleeper of *Wills* has no stepped design on both ends of the longitudinal members and has only four mounting devices at each of the longitudinal members.

In addition, the bearing lengths of *Wills* are not at least 2/3 of the longitudinal members as recited in Applicant's new claim 27. In FIG. 1 of *Wills*, the length of a longitudinal member in the direction of the rails is 22 mm and the bearing length is only 13 mm.

Accordingly, it is respectfully submitted that new claim 27, together with claims 2-4, 6-8, 10-11, 13-14 and 18-26 which depend directly or indirectly thereon, are patentable over *Wills*.

The remaining references to *Williams*, *Sweeney*, *Ickes*, and *Farnham*, cited by the Examiner but not relied on to reject the claims, have been considered but are believed to be no more pertinent. None of these prior art documents show a double-cross sleeper with the structure set forth in Applicant's new claim 27 or the benefits that are achieved by that structure.

For example, the double-cross sleeper disclosed in *Williams* has no stepped design on both ends of the longitudinal members (the ends are only inclined, see page 1, lines 49-52) and has only two mounting devices (see FIG. 1) at each of the longitudinal members.

Sweeney fails to disclose or suggest a double-cross sleeper. Moreover, this sleeper has no stepped design on both ends of the longitudinal members in the direction of the rails. In addition, the sleeper disclosed in *Sweeney* does not have six mounting devices on both of the longitudinal members as recited in new claim 27. The sleepers as shown in the drawings in *Sweeney* are positioned in a wide distance one another in a track. Therefore, the whole track cannot work as a compact frame. Creeping is prevented by projections, formed on the lower ends of the screw threaded bolts and adapted to engage with the ground. See page 1, lines 52-54 of *Sweeney*. This engagement is disadvantageous in view of the corrosion problems. As stated in *Sweeney*: "When a rail joint comes over one of the plates 4 [of the sleeper], the segments and locking plates or clips bear on the bottom flanges 18 of the fish plates 19, and the fish plates are provided with lugs 20 on their end portions, which engage with the ground below

the rails." See page 1, lines 44-50 of *Sweeney*. Therefore, the rails of *Sweeney* are not welded as can be seen in FIG. 2 as well.

The double-cross sleeper of *Ickes* has no stepped design on both ends of the longitudinal members (the ends are only inclined) and has only four mounting devices at each of the longitudinal members. *Ickes* also fails to disclose or suggest that the bearing length of the bearings is 2/3 of the longitudinal members. The bearings of *Ickes* are the plates 16 shown in FIGS. 9 and 10 and described on page 2, lines 38-43 of *Ickes*.

With the features of Applicant's sleeper as set forth in new claim 27 having a long bearing surface and six mounting devices, the whole track works as a very compact frame because of the possibility of the close arrangement of the sleepers in a rail track in the better fastening of the rails on the sleeper. Therefore, Applicant's sleeper as set forth in new claim 27 is designed for heavy loads, high speed, isolated joints and low radius lines. Despite the close arrangement, welding of the rails is possible. Therefore, defect rails can be changed easily

without lifting of the track as is usually the case in the prior art.

The remaining reference to *Farnham* discloses another track system in which the sleepers abut one another at the T-shaped portions. See page 2, lines 21-23 of *Farnham*. This arrangement is important for *Farnham* because none of the track fastenings are permanently secured to the tie. See page 1, line 44-46 of *Farnham*. Although the abut arrangement therefore prevents the creeping of the sleepers in the direction of travel of the train (see page 2, lines 24-26), a higher number of sleepers are necessary. Further, as can be seen from the figures of *Farnham*, the sleepers have only two mounting devices. With a higher number of mounting devices, the not secured arrangement necessary for *Farnham* is not possible. As can also be seen from the figures, the bearing lengths are not 2/3 of the longitudinal members and the longitudinal members do not have a stepped configuration. Moreover, one of skill in the art would not, for example, modify *Ickes* with *Farnham* because creeping is prevented by the abut arrangement of the sleepers, not by an increasing number of mounting devices, and there is no disclosure or suggestion of altering the bearing length.

Accordingly, it is respectfully submitted that new claim 27 and the dependent claims, which depend directly or indirectly thereon, are patentable over these additional cited references as well.

In summary, claims 1, 5, 9, 12 and 15-17 have been canceled, claims 2-4, 6-8, 10-11, 13-14 and 18-26 have been amended and new claim 27 has been added. The specification and FIGS. 1-3 and 5-6 have also been amended. In view of the foregoing, it is respectfully requested that the claims be allowed and that this application be passed to issue.

Respectfully submitted,
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FJD:cmm
Enclosures:
Appendix with three (3) replacement sheets of drawings (FIGS. 1-6)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 17, 2010.

Kelly Espitia

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APPENDIX